

## Agricultural Department.

### Applying Fertilizers to Cotton

Progressive Farmer.

The Georgia Station has carried out the most exhaustive trials on manner of applying fertilizers to cotton. The officials report as between the two methods used—applying in the seed furrow as against bedding on the fertilizer—the bedding on gave best results. We give the summary of conclusions reached after three years' investigation of this subject.

(1) Taking the three years' experiments together, it is quite safe to conclude that a fertilizer of which the nitrogenous ingredient consists of cottonseed meal, is more effective in increasing the total yield when applied in advance of planting and bedding on.

(2) That such fertilizer when bedded on fourteen to sixteen days in advance of planting will induce earlier fruiting and larger early yield of cotton.

Note (1) It is partly assumed that the advantage of bedding on the fertilizers in advance of planting is mainly due to the fact that cottonseed meal requires "some little time" to become soluble and available. This assumption, however, is only tentative, and it is quite probable that it is equally important that the acid phosphate and muriate of potash should be applied and bedded on some time in advance of planting.

(2) It should have been stated in its proper place that in each of three experiments from sixteen to twenty pounds of nitrate of soda, per acre, were applied in the furrows with the seed, in all of the plots. This method of applying a small quantity of nitrate of soda has long been practiced on the Station Farm and is strongly advised as a practice.

### Sulphuring Fruit.

From Progress Farmer.

A number of inquiries have come to me from time to time regarding the practice of preserving dried and fresh fruit with fumes of burning sulphur. Fruit preserved in this way is injurious to health. The fumes of burning sulphur have long been used to bleach dried fruit and prevent it from becoming dark, as is always the case with home-dried apples, peaches and other fruits. The product left in the fruit by this process is sulphurous acid, a part of which, at least, in standing is changed to sulphuric acid. Both of these products are quite injurious to health, as they interfere with the digestive processes. Fresh fruit in jars or cans in water is sometimes preserved in the same way by burning sulphur in a closed box and allowing the water or other liquid to absorb the fumes of the burning sulphur. Fresh fruits can be readily preserved in this way but they are very objectionable for eating purposes, for the reason given above. At least one apparatus to our knowledge, has been put on the market for sulphuring fresh fruits and we have reason to believe that this and other similar practices are followed in the country as an easy way of putting up fruits or vegetables for home use.

The practice is certainly very bad and the users of such prod-

ucts are bound to suffer in the long run. At present there is no way of improving on the old method of carefully preparing the fruits or vegetables and putting them up in the usual way by properly sealing in glass or tin vessels.

B. W. Kilgore.

### Shall I Mix Clay with Sandy Soil, and Plant Corn in Water Furrow?

Southern Cultivator:

Kindly answer the following inquiries in your next issue: (1) Is hauling clay on sandy soil and mixing therewith an advantage? If so, why? (2) Would you advise breaking corn land very deep and planting in water furrow? Yours truly,

Kershaw, S. C., B. N. J.

Comment by the Editor:

1. It will be very beneficial to your sandy soil to have clay mixed with it, but hauling it would be a very expensive way of securing it, unless you were removing the clay for some purpose. A better way would be to plow deep enough to bring up some of your clay subsoil and mix with the sand. An inch or two of clay turned up this way every year, would increase the productiveness of the soil. The clay is beneficial to sandy soil for the following reasons: (1) Sandy soil is too porous, and hence parts with its moisture too readily. (2) The grains of sand are insoluble and offer no food to the plant roots. (3) The clay particles are finer—they assist in making the sandy soil more compact and moist; being finer, they offer much more water and food surface to the tiny rootlets of the plants. These clay particles are much more readily converted into plant food. You have noticed that water running over clay lands becomes muddy because the particles are small enough to be held suspended in the water, and under certain forms many become soluble so the plant roots can take them up. By chemical analysis, 93 per cent of sandy soil was insoluble; while with clay, only 68 per cent was insoluble. In other words, 7 per cent of the sand was soluble, and 32 per cent of the clay. Or the clay offered 4½ times the amount of plant food. The advantages of a sandy soil are the ease with which it is cultivated, and the readiness with which it responds to the addition of soluble plant food.

2. Yes, we certainly advise the breaking of corn land as deep as you can possibly go, if the clay is dry; but we would plant on a level instead of "in the water furrow." We have planted corn "in the water furrow", and had good results; but we have had better by breaking deep and planting on a level, and found it much easier to cultivate. We think the greatest recommendation that the "water furrow" system has is that it causes many to plow a little deeper under the corn, gives the roots of the corn more good loose dirt in which to

### Fertilizer Experiments.

Mr. Johnson Has an Experiment Station on His Own Farm and Gives Results.

From Progressive Farmer.

Below I give results of some experiments in cotton for the year 1905. The land was well improved and was in cotton in 1904, and dunghill near my yard:

Rows 70 yards long, 3½ feet wide.

	lbs. Seedcotton.
No. 1—No manure,	1,455
No. 2—Two rows, 300 lbs. fertilizer before planting and 150 on June 29,	1,163
No. 3—Two rows—450 pounds before planting	1,533
No. 4—Two rows—300 pounds before planting and 60 pounds nitrate soda June 29th	1,720
No. 5—Two rows—900 pounds guano	1,782
No. 6—Two rows—450 pounds guano before planting and 60 pounds nitrate soda at same time	1,817
No. 7—One row—No manure	1,440

The land was well prepared before planted and cultivated often and well; the seasons were very unfavorable in the early part of season, favorable in the latter part.

The fertilizers used were of my own mixing, analyzing about as follows:

10 per cent phosphoric acid.  
2½ per cent ammonia.  
4 per cent potash.

Examination of table will show that liberal application of ammonia was beneficial to land of this character and that two applications were better than one. I think 300 pounds of fertilizer before planting and 150 pounds from 20th of June to 10th of July, mixed as follows:—80 pounds 14 or 16 per cent acid, 15 to 20 pounds muriate of potash, and 50 pounds nitrate soda (or 60 pounds kainit in place of the muriate of potash) will give better results than to put all the manure in before planting. Our best farmers use nitrate of soda as a topdressing on cotton in July [50 to 100 pounds per acre]. It keeps cotton green and growing late and generally pays well.

I think it pays to manure moderately well and sow wheat and oats and manure heavy; follow with peas, and manure well with acid phosphate and potash. If land is good cut vines for hay; if land is very thin and deficient in vegetable and organic matter, turn under by the three-year rotation—cotton, corn, small grain and peas. We thereby fill our land with vegetable matter which is most needed and must be furnished before we can succeed in improving our worn land and maintaining our better lands.

I have been experimenting for a number of years and the average upland has done best when ammonia and potash have been used freely—say phosphoric acid, 10 per cent; ammonia, 4 per cent; potash, from 4 to 6 per cent. Much of my land is very sandy.

H. M. Johnson.

Johnston Co., N. C.

grow, and from which to draw their nourishment. These are the fundamental principals after all. Loose earth is food for roots, and the roots will always be better able to extract a supply of food from pulverized soil.

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a solid case of men's and boys' Sample Hats. Your choice of boys' at 98c; men's \$1.25—worth double the money. Our stock of Neckwear and Underwear is new and complete and as cheap as the cheapest. We have a few winter-weight suits to close at your price in order to make room for spring goods. We want 500 men to get a pair of our 75c Overalls at 50c. No charges for showing goods.

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## Funderburk Comp'y.

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The Methodists of Rock Hill are arranging to celebrate the 50th anniversary of the founding of a Methodist church in Rock Hill. An elaborate programme has been prepared for the occasion, which will extend over several days, beginning April 12th.

### Notice of Dissolution

Notice is hereby given that the firm of D. S. Wilson & Co., of Osceola, S. C., was this day dissolved by mutual consent. The business will be closed out by D. S. Wilson. All debts due the firm of D. S. Wilson & Co. must be paid to D. S. Wilson, and all claims against said firm must be presented to him.

D. S. Wilson,  
Jas. Wilson.

3-27-06-4w.